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Occasional Paper

Stephan Tomerius

Recycling Derelict Land in U.S. and German Cities – Transatlantic Sharing of Approaches, Strategies and Visions

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The author:

Dr. jur. Stephan Tomerius
German Institute of Urban Affairs, Berlin

Distributed by:

Deutsches Institut für Urbanistik
German Institute of Urban Affairs

Straße des 17. Juni 112
D-10623 Berlin

Tel.: +49 (0)30/390 01-0
Fax: +49 (0)30/390 01-100
E-Mail: difu@difu.de
http://www.difu.de

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1. Introduction

At first glance one may wonder if there is sufficient sense in comparing the way U.S.- and German cities handle the recycling of derelict land. The differences between the two countries seem to be far too big and the prevailing conditions too different to contrast analytically in anticipation of possible transfer of good practice. The disparity starts with the vast expanses of land in the U.S. compared to the highly populated country of Germany. Bearing in mind the different traditions in land exploitation, the very strong position of property rights and the different structures in environmental, planning and tax law, one might assume it would be interesting to learn about the differences, but chances of finding transferable ideas, approaches and tools would appear to be very modest.

The differences are as basic as the definition of a "brownfield", compared with a *Brachfläche*, which Germans see as abandoned, vacant land. Whereas brownfields in the U.S. are defined as "abandoned or underutilized properties where expansion or redevelopment is complicated by real or perceived environmental contamination"[1] the German definition of a *Brachfläche* is broader and includes sites where no contamination is suspected. Using one of the main goals of recycling derelict land – preferring redevelopment of formerly used sites to occupying new land on greenfields – to identify locations expands the number and nature of abandoned sites. In Germany a remarkable increase in the availability of derelict sites is expected, for example in the shrinking fields of public service (postal service, insurance, banking, etc.) or oversized commercial parks (especially in the *Neue Bundesländer* in eastern Germany). These derelict sites go beyond the scope of the American "brownfield" definition. They are not necessarily contaminated or suspected of being hazardous.

But the mutual aim of reusing derelict land productively already suggests striking parallels between brownfield issues in the U.S. and *Flächenrecycling* in Germany. Seen from the municipal perspective, which was the main focus of the research trip, one common objective dominates the brownfield issue: sustainable urban development. It is not by accident that one finds links to the homepage of *Livable Communities Network*[2] on EPA's brownfield web pages[3].

Cities in both countries are struggling with a large to enormous amount of derelict sites in conjunction with dramatic economic change from an industrial to a service and information/communication society. Cities in both countries see these sites as blemishes in the city's image, eyesores which negatively affect their neighborhoods and sometimes expose people to hazards and endanger the rest of the environment.

It is certain that both American and German cities can benefit from redevelopment of underutilized sites. Successful projects may improve all three components of sustainability in urban areas. Ecology is enhanced because the focus on inner-city development limits

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1 This is the definition in the Brownfields Agenda of the United States Conference of Mayors (USCM), see www.usmayors.org/USCM/brownfields/agenda.htm.

2 www.livablecommunities.gov.

3 www.epa.gov/brownfields.

further urban sprawl[4] and improves quality of life thanks to site cleanup. The economy gets a boost because redevelopment of inner-city sites generates tax revenues from growing real estate, commercial and income tax bases. Welfare is improved because the cities revitalize run-down neighborhoods and may be able to create new jobs and offer labor qualification programs with numerous favorable consequences for the social climate in the communities[5].

Especially the economic benefits which could be derived from successful brownfield strategies made this topic an attractive prospect, not only for local government officials in the U.S. The cities visited on the travel fellowship whose mayors make abandoned site redevelopment a political priority range in size from Glen Cove, Long Island, population 20,000, to the metropolis of Chicago. It is therefore no surprise that municipal associations are anxious to improve the political environment for brownfield redevelopment. One of their prime targets is the rather strict federal liability regulations named CERCLA, or the Superfund Law.

Much more than in Germany, American municipal associations like the U.S. Conference of Mayors (USCM) and the International City/County Management Association (ICMA) are deeply involved in linking brownfield research activities and practice for the benefit of the municipalities.

Municipal efforts concentrate on several aspects. One of the main concerns seems to be to develop and improve collaboration and cooperation between relevant stakeholders. An existing network is destined to grow more and more into a National Brownfields Partnership by establishing coalitions and fostering relationships between the relevant public and private players. It appears that brownfield protagonists have succeeded in forming an arena for discussing federal policies and reviewing and evaluating from the standpoint of municipal planners [6]. This includes devising and implementing redevelopment strategies applicable to city practice. An important impulse for municipal brownfield policy progress is EPA's Brownfield Showcase Communities Program[7]. The authors find it crucial to go beyond city practice to develop national models and demonstrate the positive results of public and private collaboration that can be adapted and applied to other programs.

As the brownfield topic has as many facets as it has different stakeholders, the municipalities face a big challenge of moderating and navigating through the complex process in order to make the best out of urban development. From the developer's point of view cooperation in public-private partnership has to go beyond the community. Up to four levels of government – federal, state, county and city - may try to enforce their own re-

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4 The impression that urban sprawl should not be a serious environmental topic because of the amount of space in the U.S. is wrong. Especially in the smaller states, e.g. in Maryland, sprawl has reached a level that forced the state government to get involved, see section 2.2.2.

5 See *Charles Bartsch*, Lessons from the field, Washington DC 1997 (Northeast Midwest Institute), "Introduction"; see also www.nemw.org/lessons.htm; *Charles Bartsch, Elizabeth Collaton and Edith Pepper,* Coming Clean for Economic Development: A Resource Book on Environmental Cleanup and Economic Development Opportunities, Washington DC 1996, Introduction, see summary on: www.nemw.org/cmclean.htm.

6 See the articles about the joint efforts of ICMA and the Northeast-Midwest Institute (NEMW) in *Brownfield Innovations, Quarterly Report on the Showcase Communities*, Vol. 2, No. 2, 2000.

7 For more information about the EPA Brownfield Programs see www.epa.gov/brownfields and Section 2.1.

quirements. All these stipulations and regulations vary from state to state and from city to city.

On the research trip 23 interviews were conducted at different levels of government (federal, state, regional and municipal), with investigators and consultants (research institutes and law firms) and business people (developers). These interviews were conducted in seven states (New York, New Jersey, Connecticut, Pennsylvania, Maryland, Oregon, Illinois) and 11 cities (New York City; Glen Cove, NY; Trenton, NJ; Bridgeport, CT; Philadelphia, PA; Washington, DC; Baltimore, MD; Portland, OR; Chicago, IL; Buffalo/Niagara Falls, NY). And the state voluntary cleanup programs differ as much as the cities' strategies, approaches, incentives and instruments.

Therefore the following report tries to focus on and highlight the aspects in federal, state and municipal approaches which may be of particular interest to Germany and contrast with German practice. But it is utterly impossible to elaborate on all the different federal, state and local strategies and instruments. Thus the following words referring to the Showcase Community Program are also right for this research trip: "Researching, documenting and comparing individual brownfields communities is like making a salad with lettuce, tomatoes, ham sandwiches and grits. The ingredients are not comparable"[8].

8 *Molly Singer*, "Two Years, Sixteen Cities, Twenty Partners, Countless Lessons …", Brownfield Innovations, Quarterly Report on the Showcase Communities, Vol. 2, No. 2, 2000, pp. 1, 7 ff.

2. Brownfield Issues in the U.S. – Players and Roles

This section gives an overview and provides some background information about the players involved and their roles as a foundation for the following sections, which will deal with more specific strategies, approaches and tools of brownfield redevelopment.

According to a recent survey of the United States Conference of Mayors (USCM) there are more than 21,000 brownfields alone in the 232 cities taking part in the survey[9]. The number of known brownfield sites in the U.S. is estimated at 400,000. Site availability for redevelopment is high. Some cities assume that their supply of abandoned land could satisfy development demand in the city for about 150 years[10]. Redeveloping unattractive sites is the main problem if you see redevelopment of brownfields as a tool to avoid more urban sprawl. You have to cope with the fact that there will be a high number of sites in unattractive locations where business just won't go. Other options in addition to commercial uses have to be found. Giving these sites back to nature by establishing "land banks" could be an idea for future adoption.

Most large polluted sites are held by business firms. They are not touched because of the risk of liability and the subsequent costs of remediation. These privately owned sites, nicknamed "mothballs"[11] remain unused and abandoned. The cities cannot solve these problems. The states or the federal government must tackle them.

Most brownfield sites were cleaned up without public money. There are sites which are redeveloped because it is profitable to do so, but there are other sites which will never be reclaimed because they are too polluted and/or situated unfavorably. In between are the sites where public money can help and incentives do matter[12].

The general problem is that there are many different players involved on the brownfield issue. Each of them has their own perspective and often thinks that they alone are in the right. So the challenge is to bring the parties together and find a common point of view. But this turns out to be rather complicated when the overall planning environment, especially the prevailing regulations, does not provide a stable framework[13].

The following subsections try to give more specific insight into brownfield policies, strategies and programs, based on the interviews conducted at different governmental levels.

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9 *United States Conference of Mayors,* Recycling America's Land, A National Report on Brownfield Redevelopment – Volume III, February 2000, p. 9.

10 Interview with *Michael Pawlukiewicz*, Director, Environmental Land Use, Urban Land Institute (ULI), Washington DC; ULI is a think tank consulting its members, individuals across the U.S. (especially developers, planners, city officials); the institute is a platform for the exchange and distribution of knowledge and practice between its members; conferences and publications are its tools; ULI also works with federal institutions such as EPA.

11 *Chelsea Albucher*, EPA Brownfields Coordinator, Region 2.

12 *Douglas MacCourt,* environmental lawyer, formerly Director of the Portland Brownfield Initiative.

13 Interview with *Jerylin Perrine*, Commissioner of the Department of Housing, Preservation and Development, New York City, and staff members *Sheila Machado*, *Helen Gittelson* and *Walter Robbins*.

2.1 Federal Level – EPA Superfund and Brownfield Programs

EPA as the responsible federal environmental authority, has addressed the problem of contaminated sites on two levels: first, there are the most dangerous, highly contaminated sites which are governed by the so-called Superfund Law. Second EPA has established several programs to deal with the much greater number of less-contaminated sites, called "brownfields". "Brownfield coordinators" have been established to foster cooperation between federal and state authorities and further collaboration with municipal players. There are coordinators for 10 regions all over the U.S. trying to link federal with state programs and activities[14]. EPA stresses that it only wants to play the role of a moderator and facilitator. But on the state and municipal level, a certain mistrust and fear of being overruled by strict federal regulations and requirements undoubtedly exists[15].

- Federal Superfund Law[16]

The legal base of the EPA Superfund program is the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), nicknamed "Superfund Law". Sites that meet certain criteria of high contamination are listed and fall under CERCLA. Following the "polluter pays principle" CERCLA taxed the petroleum and chemical industry in order to create financial resources to defray cleanup costs from contributions by the main ground polluters. This was dubbed "Superfund."

After a short time the question of liability became the main objection to this law. Strict liability for cleaning up contaminated sites deters banks and other lenders from helping investors locate on Superfund sites. Superfund became a stigma and a self-destructive stumbling block to development and reuse of abandoned property.

In the meantime EPA, state authorities and investors have found a pragmatic way to get around strict liability of lenders and those landowners who did not pollute their sites. Liability is excluded by agreement when certain cleanup standards are met. Since the taxation was time restricted, CERCLA has in the meantime expired. New federal legislation is considered necessary, but the House and Senate have not yet decided to act.

- EPA Superfund Programs[17]

Municipalities can apply for a grant of $100,000 in order to explore possible uses for their sites. Around 50 cities have obtained a grant. Most of the cities have hired an expert to investigate the future use of the sites. Superfund is also related to state programs. EPA is integrated in the state programs and acts as a moderator and facilitator. An outreach staff supports the states and cities, especially in the field of community involvement. States and municipalities are quite sensitive about EPA involvement. They fear that EPA will in-

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14 Find links to all 10 EPA Brownfield Regions on www.epa.gov/brownfields.

15 See *Dana Joel Gattuso*, Revitalizing Urban America, Cleaning up the Brownfields, Washington DC, July 2000 (Competitive Enterprise Institute, CEI), especially pp. 10-15.

16 For an overview of federal and state legislative activity see the links of the Northeast-Midwest Institute on: www.nemw.org/brownfields.htm.

17 EPA Superfund Office interviewees were *Melissa Friedland* and *Suzanne Wells,* the latter on community involvement; see overview and links to different EPA programs and initiatives on www.epa.gov/brownfields.

terfere in their programs, demand stricter standards and overrule state approaches. Therefore intergovernmental working groups and meetings are growing in importance.

EPA is aware of the fact that there are many Superfund sites where investors refuse to get involved. Apart from commercial reuse, ecological approaches must be taken. Parks as well as mixed use – business and recreation – were developed in showcases. Where unattractive sites are involved, EPA seeks alliances with non-profit-organizations and environmental groups. Further cooperation may lead to innovative projects: the U.S. Soccer Federation wants to promote soccer in the U.S. Officials have shown great interest in building soccer stadiums on brownfield sites. Contact with EPA Superfund offices has been established.

- EPA Superfund Community Involvement Program

Community involvement is seen as a necessary step to be taken at the earliest possible stage of the procedure. Projects will not be successful in the long run if community acceptance is lacking. Therefore residents must be integrated in the initiatives in a meaningful way; they have to feel that their voice is being heard. However, only a relatively small number of cities have installed community involvement managers[18].

CERCLA requires an early public hearing, but such a forum is often found to be too big to work as an efficient tool for community involvement. So EPA goes further and facilitates smaller meetings in the community. At an early stage meetings are attended by representatives of the community, chamber of commerce, city and government officials.

EPA's facilitator role is to help establish community advisory groups. The agency also provides assistance on grant applications. Technical issues may also be addressed by university consultants working under an EPA grant. Technical assistance was requested for 220 out of 1,400 Superfund sites. A neutral facilitator, e.g. from a university, may be of particular value in reaching a consensus on particularly thorny projects.

Residents' concerns on brownfield issues often include:
- Health hazards,
- Standards of remediation and cleanup,
- Intended form of reuse,
- Impact on neighborhood property values.

- EPA Brownfields Program[19]

CERCLA, or the Superfund Law, also applies to Brownfield politics and programs. Thus the Brownfields Program can benefit from the funds gained through taxing the oil and chemical industries.

The EPA program basically consists of four parts: The first part is related to pilot projects: EPA hosts 362 pilot projects in the U.S. These are assessment pilots in different regions[20].

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18 See the example in Bridgeport, Section 6.2.

19 The interviewees in the EPA Brownfields Office were *Karl Alvarez* and *Dale Medearis* (Office of International Activities).

20 See *Institute for Responsible Management (Charles W. Powers/Frances E. Hoffmann/Deborah E. Brown/ Catherine Conner)*, A Great Experiment, Brownfields Pilots Catalyze Revitalization, 2000.

Each region is organized by a Regional Brownfield Coordinator. Assessment grants are for $200,000.

The second part consists of Revolving Loan Funds (RLF): The city loans federal money to projects. Repayments are plowed back into the fund and used to support further brownfield projects. 104 pilots participate in RLF. According to EPA Brownfield Office EPA has provided $165 million in RLF within eight years. Leverage is estimated at $2.3 billion. About 7,000 jobs have been created. An RLF loan amounts to $500,000 per jurisdiction. There are plans to raise this sum to $1 million.

Third, the Job Training Program, focusing on restoration and renovation of buildings, etc. 37 pilots have taken advantage of its $200,000 grants and of the iterative process which is involved. The participating communities can recruit workers for their projects out of the training pool.

The fourth part of the EPA Brownfields Program is "Showcase Communities": At present there are 16 showcases. This number is to be increased. A showcase community gets $200,000 and has the advantage of close cooperation with EPA. Apart from that an EPA member is sent to the city to support its projects. Another $200,000 is granted to employ this person.

- Tax Incentives

Tax incentives play an important role in EPA's brownfield strategies. Several incentives are given to induce investment in brownfield sites:
- Deduction of environmental costs on federal (and state) income tax,
- Deduction of environmental costs on municipal property tax,
- Tax deferments (payment can be postponed until the project is running).

2.2. State Level – Voluntary Cleanup Programs

As a reaction to the very strict federal regulation, several states have established voluntary cleanup programs addressing the brownfield issue with an approach which is more co-operative than mandatory[21].

Standards of state voluntary cleanup programs can be more flexible for brownfield sites which do not fall under federal "Superfund" rules. Apart from parallels in e.g. concerning financial incentives and liability protections there are also significant differences in quality between the states. State New York for instance is definitely behind New Jersey, Illinois, Maryland and Oregon on this score.

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21 A good overview over the Voluntary State Programs give *Todd Davis and Kevin Margolis (Edit.),* Brownfields, A Comprehensive Guide to Redeveloping Contaminated Property, 1997, p. 287 ff.; see also the links to many state programs on the elaborate website of the Northeast-Midwest Institute, Washington DC, on: www.nemw.org/brownfields.htm, under "Reports" and "Contacts"; see also the overview in: *Charles Bartsch, Elizabeth Collaton and Edith Pepper*: Coming Clean for Economic Development: A Resource Book on Environmental Cleanup and Economic Development Opportunities, 1996, Section 4, summary at www.nemw.org/cmclean.htm.

Sometimes states still fear that EPA will step into the act and try to dominate redevelopment with its stricter rules and regulations with regard to remediation standards and liability issues[22]. On the other hand, EPA regional coordinators state their role as mainly moderators, leaving specific issues to state and municipal authorities[23].

2.2.1 New Jersey[24]

The state has about 8 million inhabitants, and the population is expected to grow by another million within the next few years. New Jersey profits substantially from the fact that the cities of New York and Philadelphia are just across the river from the Garden State. Many businesses are relocating in New Jersey because taxes on sales and real estate tend to be lower than in the New York and Philadelphia metropolitan areas. 60% of New Jersey's surface is already developed. Most of the Garden State is now zoned for residential purposes, jeopardizing policies to protect farmland.

- State Policies and Strategies

Governor Christie Whitman has an ambitious plan: preserving 20 % of the land to maintain its rural character. The 1,500 square miles must be purchased from owners who might prefer to sell to housing developers for a higher price. However, the state already owns about 10% of the land it intends to preserve as open space. In the light of this situation, brownfield redevelopment is one of the state's major approaches to reach its goal of keeping 20 % of its surface undeveloped.

In the mid 90's the New Jersey Department of Environmental Protection (NJDEP) established a *Voluntary Cleanup Program* (VCP). Key elements of VCP are a *Memorandum of Agreement* (MOA), in which duties of administration and investors are fixed on a contract base and a *No-Further-Action-Letter (NFA),* in which NJDEP guarantees to take no further actions as long as the requirements agreed on are kept. MOA and NFA are flanked by important instruments of liability protection and financial incentives for investors and developers[25].

- Intergovernmental Approaches

State departments of treasury, commerce, housing and transportation, and environment have launched a joint campaign to boost brownfield redevelopment in New Jersey. An intergovernmental task force was created. Meetings are held regularly. After initial setbacks this cooperation has entered a productive phase.

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22 See *Dana Joel Gattuso*, Revitalizing Urban America, Cleaning up the Brownfields, Washington DC, July 2000 (Competitive Enterprise Institute, CEI), pp. 10-15.

23 Interviews with U.S. EPA Region 2 (*Chelsea Albucher*, Brownfields Coordinator, New York City) and Region 3 (*Tom Stolle*, Brownfields Coordinator, Philadelphia).

24 The following information is from an interview in the New Jersey Department of the Environment (*Larry Schmidt, Terri Smith*) and a talk with *Larry Schmidt* on an excursion to well-chosen showcases between Trenton and New York City.

25 For more information about the single elements of VCP and about liability and incentive issues in New Jersey see *Motiuk and Monaghan*, in: Todd Davis and Kevin Margolis (Edit.*), Brownfields, A Comprehensive Guide to Redeveloping Contaminated Property*, 1997, p. 518 ff.

- Liability

Liability concerns were major impediments to getting brownfields into productive reuse in New Jersey as well. State law offers exemptions from strict liability for investors and developers who are not responsible for the pollution of the site. Liability protection is also offered for banks and other lenders as long as they did not actively participate in the former management of these sites. No further legal actions are guaranteed if site investigation requirements and cleanup standards are met. According to NJDEP up to now no cases saying those agreements would violate federal or state law have gone to court.

- Tax Incentives

Especially in the mid 90's a number of financial supportive measures have been embodies in state law. These programs mainly support site investigations and remediation measures and range between 1 and 2 million $ per year and entity[26].

The cities are allowed to offer real estate tax credits to investors. Within a period of 15 years investors get credits of 15% for projects developed on brownfields. The cities' loss of tax revenue is more than compensated. They may lose 15% real estate taxes for 15 years, but remember that there would not have been any significant tax income generated for the city if redevelopment had not taken place. This incentive is a prime example of a "win-win-situation" for the city and the investor.

2.2.2 Maryland's "Smart Growth Program"

- History of Maryland's Smart Growth Program[27]

Maryland is a rather small state with 5 million people, but the population is expected to grow by a million within the next 18 years. There is little federal or state control over land use and the planning process.

The problem involved Maryland's location within the heavily developed Washington, Baltimore, Philadelphia, New York, Boston corridor. After initial experiences with voluntary and regulatory approaches and community involvement with the Chesapeake Bay in the early 1980s, the state also switched to land use topics. Maryland was one of the first states to deal with these issues. In the early 1990s the state made an effort to put a land use planning system into place for the 23 local jurisdictions. After strong resistance by the municipalities the planning law ended up in several visions to be implemented in a municipal comprehensive plan. However, the legislation had no "teeth". Over the years urban population declined as the number of households in rural areas rose. The exodus from the cities fulfilled the American dream of a family home in the country. Apart from burgeoning per-capita property size this sprawl caused terrific traffic snarls. Enormous expansion occurred around Washington DC, in particular.

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26 *Motiuk and Monaghan*, p. 521 f.

27 The information about the State Programs in Maryland was given by *Shari Wilson*, Program Administrator Environmental Restoration & Redevelopment Program, Maryland Department of the Environment; about Maryland's Voluntary Cleanup and Revitalization Program see *Carey and Armold*, in: Todd Davis and Kevin Margolis (Edit.), Brownfields, A Comprehensive Guide to Redeveloping Contaminated Property, 1997, p. 433 ff.

The state realized that this trend will cost taxpayers millions of dollars to construct new infrastructure. In Maryland's wealthiest county 58 schools were closed and 61 new ones were built. This not only caused an enormous additional tax burden. Another objection is that there was no good reason why the resources were not put into upgrading and upsizing the existing schools instead. The old adage of municipal and county planners that the increased tax revenue generated by population growth would completely pay for the new infrastructure (fire and police protection, schools, water, sewers, roads and other utilities) turned out to be wrong. On the contrary, it was demonstrated in several cases that the infrastructural costs would exceed new tax income. Carrying on with the old way of developing new land would have entailed a higher tax rate. This step would not have been very popular with the voters.

Consequently, the state had compelling reasons to start with the Smart Growth Approach in 1997. Environmental arguments alone would most likely not have convinced the authorities to revamp planning and developing procedures.

- The Smart Growth Program[28]

The main message of the program is: "Build up your communities, preserve the outlying rural areas and save money[29]!" The combination of land use and traffic topics is the crux of the program. Avoiding a top-down approach, the program is based on incentives only. There are no strictly binding instruments. The "only" tool employed is tying access to money for necessary infrastructure and transportation funds to the program aim. But as money also makes the world of development go round, this can be a very effective tool.

An important role is played by the Priority Funding Areas (PFA). These are districts that match specific density criteria in order to qualify for priority funding. PFA is designed to focus development and financial resources on certain areas and thereby protect other areas from being used. The municipalities have the right to designate PFAs. In some cases their specifications are debatable, leaving loopholes for growth in certain sensitive areas. But state law dictates that state funds can only be allocated to areas designated as PFAs. PFA requirements by state law are supplemented by executive orders of the governor, which is the law of Maryland as long as it is in place: It stipulates that every program and decision is to be reviewed for compliance with the PFA goal of protecting rural space.

As a consequence of these rules several bypasses around towns already on the state transportation agenda are now excluded from state funding now because they are beyond PFA borders. NJDEP sees this as a major shift from the traditional state policy to fund roads throughout the state.

PFA laws are supported by four companion laws:

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28 See *Shari Wilson,* Maryland's New Voluntary Cleanup Program, National Environmental Enforcement Journal, July 1997, pp. 3-7; see also state government brochures: *Maryland Office of Planning,* Smart Growth Fact Sheets; *Maryland Department of the Environment,* Environmental Restoration and Redevelopment Program; *Maryland Department of Business & Economic Development,* Maryland Financing Programs and Business Incentives.

29 *Shari Wilson,* in the interview.

1. The Rural Legacy Program giving money to counties to acquire rural property or to obtain easements restricting the right to develop. A huge amount of money is available for this program. However, it is hard to compete when property owners think of selling to developers who plan housing developments.
2. The Live Near Your Work Program, a small pilot program supporting purchasers of homes near to their work.
3. A program funding public transportation e.g. if a transit center is planned within the new project.
4. Incentives for job creation and vocational training through tax credits.

In the meantime nearly all state funding programs are linked to PFA.

The integrated approach to land use and transportation issues plays a crucial role in the Smart Growth Approach. This is because the transportation agency provides the biggest part of the funds to the municipalities. To tap this resource, projects now have to meet PFA-related Smart Growth criteria. Transportation funds can be used to add sidewalks, pathways or bicycle routes to offer alternatives to car-dominated mobility.

2.2.3 The Voluntary Site Remediation Program in Illinois

The State of Illinois has an advanced Voluntary Site Remediation Program (SRP) based on a 1995 state legislation that focuses on potential investors' need for certainty about potential remediation and liability risks[30]. Cooperation between investors and city departments of environment and planning are usually linked to SRP. The main tool to give developers protection and long-term certainty for intended brownfield projects is the "No Further Remediation Letter" (NFRL) from the Illinois Environmental Protection Agency (IEPA). This letter serves as an agreement clarifying cleanup guidelines and standards. An important SRP advantage is flexibility in cleanup standards; the requirements are related to the intended use, meaning lower remediation costs for less sensitive uses. This approach prevents establishing overly strict cleanup requirements and definitely heightens the motivation and the chances of implementing brownfield projects. In practice, state and city authorities cooperate well in order to fulfill cleanup standards and procedures as soon as possible[31].

If guidelines and standards agreed on in the "No Further Remediation Letter" are complied with, NFRL offers protection against liability. State law precludes the state from seeking remedial activities or response costs from anyone other than the person who is responsible for the contamination of the site. In addition to that joint liability is repealed and substituted by a "Proportionate-Share-Liability". Furthermore financial institutions that acquire ownership, management etc. of a facility through foreclosure or security in-

30 For details of legislation provisions, program mechanisms and incentives see *David Engel*, in: Todd Davis and Kevin Margolis (Edit.), Brownfields, A Comprehensive Guide to Redeveloping Contaminated Property, 1997, p. 385 ff.

31 Interview in the Chicago Department of Environment (*Kelly S. Kennoy*, Director of Environmental Services).

terests are not considered "owners" or "operators" according to Superfund liability law[32]. Liability protection based on state law and NFRL also covers the discovery of unexpected contamination on the site. In this case the state, city and property owner are compelled to come up with a joint solution.

2.3 Municipal Level – Strategies and Needs

Brownfield redevelopment is a common topic in many American municipalities. It was already mentioned in the introduction that the opportunities and benefits from revitalizing abandoned urban sites are strong motives and political advantages for local officials. Ecological, economic and social benefits make redeveloping brownfields a hot tip for sustainable urban development[33]. The cities and their associations are anxious to augment resources on the federal, state and municipal levels.

- Strategies in the Cities

As redevelopment is primarily a matter of finances the cities are eager to get the highest possible amount of funds and grants from the federal government and the states. Some cities are pretty inventive, especially in tapping the "Community Development Block Grant Program" (CDBP). This program is run by the U.S. Department of Housing and Urban Development (HUD). Low-interest HUD loans must be repaid by the cities. Therefore it is of utmost importance that profitable projects are implemented in suitable forms of public-private partnership so that loans can be paid back through rising urban real estate tax revenues. A variety of additional state and municipal tax incentives are major instruments in stimulating redevelopment on abandoned sites[34].

Several cities have established regular meetings or forums for brownfield issue stakeholders (e.g. Dallas and Chicago). Innovative approaches are found in the course of remodeling old buildings and preparing them for reuse. Legal hurdles are deliberately kept low to foster competition for creative solutions and indoor uses. Very early in the game, buildings are opened for public inspection, giving potential purchasers and users something to think about. This combination of construction and marketing proved to be very successful. On the other hand, there are cities where the process of redeveloping brownfields is rather painful and fraught with uncertainties, often involving restrictive and complicated state law[35].

- United States Conference of Mayors' (USCM) View of Brownfield Redevelopment[36]

Brownfield redevelopment is a key topic in many American cities which want to rechannel economic development back to the cities, fight urban sprawl and revitalize run-down

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32 See details of Illinois Liability Protection Program and Laws in *David Engel*, in: Todd Davis and Kevin Margolis (Edit.), Brownfields, A Comprehensive Guide to Redeveloping Contaminated Property, 1997, p. 387 f.

33 Section 3 focuses on motives and benefits of brownfield redevelopment in the cities.

34 See the example in Chicago, Section 6.5.

35 Such problems were stressed in New York City.

36 Interviewpartner at the United States Conference of Mayors (USCM) in Washington DC was *Judy Sheahan*, Brownfields Program Manager.

neighborhoods. They consider it vital to review the strict federal Superfund Law, which has spread uncertainty among developers, investors and city officials especially regarding liability. Clear distinctions between federal and state responsibilities should be made. Corrections in federal law should provide for nationwide clarity on brownfield standards and liability. States and municipalities need assurance for their own programs. They require immunity from being overruled by EPA as long as standards are met and risks are negligible.

USCM cites eight municipal brownfield policy demands[37]:

1. Liability protection for innocent parties involved in brownfield redevelopment;
2. Tax incentives to attract more investors;
3. Increase of federal resources to assist cities with assessment, cleanup, redevelopment and infrastructure improvements;
4. Support of voluntary cleanup approaches and standards related to future intended use;
5. More attention to quality-of-life issues and economic impacts of brownfields, including the costs of sprawl;
6. Regulatory flexibility for local governments and latitude in the use of federal brownfield resources;
7. Stronger establishment of a broader range of partnerships between the affected parties in brownfield redevelopment;
8. Development of strategies to prevent properties from becoming future brownfield sites.

- Political Strategies

The Conference of Mayors seeks cooperation with other stakeholders, e.g. the American Farmland Trust. Alliances influencing the lawmaking process are sought in order to support mutual interests such as the protection of farmland by concentrating development on derelict land. Further cooperation has been established with the Joint Center for Sustainable Communities, serving cities and counties. Special attention is given to zoning, because counties and cities are responsible for zoning in rural and urban areas.

Apart from environmental hazards, further sprawl causes higher costs because it necessitates new infrastructure (schools, roads, sewers, etc.). This fact is used as an argument against development on greenfields in political debate.

As there is still a great deal of uncertainty regarding Superfund liability regulations – strict bank liability has been loosened in the meantime – the Conference of Mayors and the American Bankers Association are conducting seminars to clarify the situation and encourage financial institutions to get more involved in the brownfield issue.

- Exchange of Knowledge and Experience between American and German Cities

City planners great interest in intensifying the transatlantic exchange of knowledge and sharing experience in brownfield practice. USCM mentioned the following areas of special interest:

- Instruments of financing,

37 See www.usmayors.org/USCM/brownfields/agenda.htm.

- Planning approaches, combined with systems of public transportation,
- Regional approaches and city-county cooperation,
- Exchange of best practice,
- Handling of cleanup standards,
- Methods of risk assessment,
- Technology costs.

2.4 Brownfield Redevelopment Between Municipal Competition and Regional Approaches

Cities are competing fiercely for inhabitants and investors, ratables and jobs, for mostly selfish reasons. This predicament calls for regional approaches to overcome competition which makes it easy for investors to descend on greenfield projects. It was no surprise that the phenomenon of competition between the cities is also rampant in the U.S. In nearly every interview intermunicipal competition was mentioned as one of the main forces promoting further sprawl and thus limiting the chances for brownfield redevelopment in the cities. Selfish policies triggered by local politicians' compulsion to exhibit success in attracting or retaining business, creating jobs and expanding the tax base put a tight pinch on chances for brownfield redevelopment.

Regional approaches forcing several municipalities to cooperate and find a regional perspective for controlled, "smart" growth with a focus on redevelopment issues are very rare. Apart from the very unique example of the Portland, Oregon, metropolitan area[38] more informal approaches tend to prevail. Discussions of the future of the region among high-ranking executives and officials are more common. A leading New Jersey municipal official has chosen a quite informal approach: breakfast roundtables are bringing leading officials and businessmen of the region together, establishing personal contacts and providing information about possible projects from which the municipalities and the region could benefit as a whole. The regular meetings and growing trust are conducive to mutual fulfillment of visions and making win-win-projects more likely[39].

Current instruments and organizations to overcome isolated, competitive municipal planning by taking a regional perspective seem to be insufficient. An example of a regional approach and its limitations can be found in northern Virginia[40].

- The Northern Virginia Regional Commission (NVRC)

NVRC is a platform for the exchange of information between several Virginia member municipalities. It aims to improve development in the region through cooperation between the participating municipalities. A strong motive for regional approaches is the fact that a comprehensive plan is often a requirement for federal or state funds.

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38 See details in Section 6.4.

39 During the interview with EPA Region 2, New York City, an example was mentioned where a developer built a park as an initial project to improve quality of life as a springboard to follow-up housing projects.

40 The following information is from an interview in the Northern Virginia Regional Commission (*Douglas Pickford*, Director, Economic and Heritage Resources; *James L. Van Zee*, Director, Regional Planning Services)

The area in Virginia around Washington, DC, is undergoing rapid growth. Many firms locate outside DC because of the lower ground prices and taxes. Also the short distance to the expanded Dulles International Airport functions as a magnet for the New Economy. NVRC focuses on balancing the interests of the municipalities and counties in terms of further development. There is vigorous competition between counties and municipalities in locating new business. Improving the cities' tax base in order to finance infrastructural projects is of major importance. Virginia cities benefit from real estate and commercial taxes. In some states municipalities also get a share of income tax revenues, but this is not the case in Virginia.

However, in the commission's planning practice brownfield redevelopment is not systematically applied as an instrument to prevent further urban sprawl. But some of NVRC's regional approaches can be of indirect support.

- Strategies and tools in planning

NVRC attempts to concentrate growth on certain areas. The commission tries to convince its members that new greenfield projects inflict enormous infrastructural costs (sewers, schools), ultimately eating up or exceeding new tax income. Directors cited further tools, especially zoning measures, to insulate farmland from further sprawl:

- Transfer and purchase of private development rights,
- Infrastructural requirements for projects (e.g. schools),
- Restrictions of house construction according to size of the area (sliding-scale zoning),
- Cluster of buildings on property,
- Proffers (special conditions for zoning, e.g. payments are agreed on in deals between developer and municipality prior to zoning),
- Impact fees (payments to the municipality or county for infrastructure required by the project, e.g. for roads, schools, usually paid when the building permit is approved).

Most of these tools do little to prevent urban sprawl. They are more likely to provide support to improve infrastructure. As tools to prevent urban sprawl, the commission mentioned:

- Purchase of land in green areas identified as sensitive,
- Easements on property (legal use restrictions, often connected with compensation),
- Condemnation of private property (rare, compensation obligatory),
- Zoning,
- Environmental law restrictions,
- "Strategic" use of long-term permits,
- Tax incentives for greening property (real estate and income tax breaks).

There is a growing consensus that the municipalities need more financial resources to be able to purchase open spaces to contain urban sprawl.

3. Redevelopment Driving Forces – Motivations and Benefits

An important strategy is to clarify and publicize the benefits of brownfield redevelopment. From the municipal perspective it is not merely economics, but also environmental and social advantages that make the brownfield issue an attractive tactic for local politicians.

3.1 Improving the Municipal Tax Base

Probably the strongest motivation for the redevelopment of brownfields is based on a very simple idea: abandoned brownfields are negative assets, but could unleash resources for the cities when they are put into productive reuse again. Improving the city's tax base is one of the major driving forces for brownfield redevelopment. Higher tax revenues are most frequently generated by rising real estate taxes on redeveloped land. This provides cities with resources for other urgent municipal priorities (schools, infrastructure). In a recent survey of the *United States Conference of Mayors (USCM)* three fourths of the 232 respondents estimated that additional tax revenues from brownfield redevelopment would end up in the range between $902 million and $2.4 billion[41].

3.2 Improving Environmental and Social Quality of Life in the Cities

Another driving factor is the enhancement of life quality in the cities. This not only refers to environmental cleanup of contaminated sites or preventing further sprawl into rural areas. There is also an important social aspect: in economically and socially deteriorating neighborhoods suffering from devastating structural and industrial change, redevelopment sends a clear signal that revitalization is in progress. This includes mixed-use projects, e.g. combining housing and commercial zones, as well as attempting to establish a social mix of inhabitants. These goals are very ambitious, but in some cities like Boston the approach has paid dividends.

Moreover, several cities realize that quality of life and economic growth go hand in hand. Therefore brownfield redevelopment is seen as an effort to convince potential investors of the quality of the city and persuade them to locate business there. This approach also applies to companies already operating in town: by redeveloping brownfields and enhancing the "soft" factors in business location decisions the city is accumulating arguments to make investors stay in town[42].

Another important social benefit is job creation: in the United States Conference of Mayors survey mentioned above, 190 of 232 respondents estimated the amount of newly created jobs on brownfields at 587,000[43].

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41 *United States Conference of Mayors,* Recycling America's Land, A National Report on Brownfield Redevelopment – Volume III, February 2000, pp. 9-10.

42 See the Bridgeport approach in Section 6.2.

43 *United States Conference of Mayors,* Recycling America's Land, A National Report on Brownfield Redevelopment – Volume III, February 2000, p. 10.

3.3 Brownfield Redevelopment and "Smart Growth"

In the meantime different states run "smart growth" programs[44]. Sometimes the term "slow growth" is used. This could be misleading: "slow growth" might only shift expansion from one area where it has stagnated to another. Growth – seen as a positive phenomenon or force of stimulation and revitalization – should be related to the main question: how a city handles growth in its area and controls it to sustain quality of life at the same time[45]. An example of relentless growth is the city and area of San Diego: more than 1 million people are expected to move there during the next few years.

Another phenomenon has been observed recently: with the decrease in the crime rate and improvement of economic development, people start moving back to the cities. Although younger families continue to move into houses on city fringes, movement in the opposite direction is taking place. Also due to demographic reasons a remarkable number of older people – "empty nesters" whose children have gone their separate ways – find their way back into neighborhoods which offer urban atmosphere and entertainment. However, mainly the well-to-do return to town because of higher inner-city property prices and rents.

Portland, Oregon, is an interesting showcase city for growth management. The city has been criticized for its rigid model of "growth boundaries" which allow new development only in certain zones[46]. The main motivation was to protect farmland and agricultural resources, not to contain urban sprawl. The city succeeded in preserving these resources and speeded up development in growth areas. Authorities are obliged to approve or disapprove of development projects within 120 days. During the 1990s Portland was able to attract industry, especially in the high-tech sector. A key factor was the quality of life in the city and its environs.

Examples of "smart" development and traffic management can also be found in the cities of Washington and Chicago. In Chicago the new baseball stadium broke with the "fried egg" tradition of building a stadium with a huge parking area around it, attracting thousands of cars. The White Sox stadium is built down into the ground and connects directly to city streets. When entering and leaving the ball park fans put additional life back into the streets. Similarly the MCI sports arena in Washington did not build a parking garage or a parking lot. It is closely linked to the subway, and spectators also enter the arena from the streets. The reaction was quick: Already restaurants, etc., have located around the arena, giving downtown DC life a new kick[47].

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44 See Maryland's Smart Growth Program, Section 2.2.2 and the concept of "growth boundaries" in Portland, Oregon, in Section 6.4.

45 *Michael Pawlukiewicz*, Director, Environmental Land Use, Urban Land Institute (ULI), Washington DC, in the interview.

46 See Section 6.4.

47 Information from *Michael Pawlukiewicz*, Urban Land Institute (ULI), Washington DC, in the interview.

4. Obstacles

From the municipal perspective the major obstacles to brownfield redevelopment are the lack of funds to clean up sites, liability issues and the need for environmental assessments[48]. The following additional obstacles were mentioned in the course of the interviews[49].

4.1 Mistrust in New Cost-Effective Technologies

One of the main barriers is difficulty in bringing new cost-effective technologies into the procedure of redevelopment. There is reluctance and mistrust of new technologies. City officials and communities often doubt the effectiveness and safety of new approaches which could make redevelopment much cheaper and raise the chances for projects to be implemented. The solution is more and better information. Concerns of officials revolve around this question: "Who will guarantee that this cost-effective technology leads to safe conditions on the site?" Residents' fears could be overcome by integrating a neutral expert in the process. This could be a university researcher. The EPA technical assistance program[50] is helpful on this score.

More flexible standards and methods of cleaning up sites also encounter mistrust. This applies to remediation standards appropriate to the intended reuse, i.e. less strict for commercial use than for residential construction with playgrounds. A way to get more flexibility without causing more risks could be "risk based corrective actions".

4.2 Blockades in Giving Financial Incentives

There is still reluctance to give incentives for brownfield projects. Tax reductions, abatements and cost deductions are sometimes still seen as losses for the taxing authority. This short-term perspective overlooks the long-term benefits of incentives: property, income and commercial taxes from the project being implemented will far exceed the "financial losses" of the community – bearing in mind that there would not have been any taxes at all without the project.

4.3 Incongruity of Terms in Office and Project Implementation Periods

Bigger projects need persistent political support. This becomes a problem when politicians have to exhibit successes, especially near the end of their terms in office. Long-term projects often exceed periods between elections. Attacks from political opponents questioning city investments and the success of projects can be a major threat to their completion.

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48 *United States Conference of Mayors,* Recycling America's Land, A National Report on Brownfield Redevelopment – Volume III, February 2000, p. 9.

49 Apart from information from the cities, the subject of obstacles was discussed in detail with *Charlie Bartsch* in an interview in the Northeast-Midwest Institute in Washington DC.

50 See section 2.1. with regard to EPA Community Involvement Program.

4.4 Liability and Cleanup Standards

Liability matters are still seen as the most severe impediments to investment in brownfields. CERCLA's strict and joint liability rules still hamper efforts to expand brownfield activities. Although EPA and some states try to find ways to get around lender liability, many banks were driven out of the business of financing investment on contamination-suspected sites.

Strict CERCLA legislation had negative consequences for the chances of development on brownfields. Superfund stigmatized properties so owners did not want to have their sites investigated and put on the National Priority List (NPL). Even if it provides money to support site cleanup, being listed as a Superfund site could have adverse financial consequences. For one thing: as a rule EPA lawyers had to get the money for cleanup back from the private landowner.

The Superfund stigma had another explanation: experience showed that suits were filed the moment a property was listed. This is because of CERCLA's strict and joint liability. Fearing accountability because of potential contributions to the contamination, neighbors began suing the site owner and/or each other to protect themselves preventively. This legal environment was and often still is a main obstacle to bank loans for investments on these sites.

EPA's reaction, installing lender liability protection, cannot thoroughly reassure lenders. Apart from the hassle EPA management rules create, there is a time restriction of 12 months before lenders can repossess property. All in all, EPA's approach of establishing lender protection seems only to clarify some procedural aspects rather than provide relief from liability risks. Nevertheless, liability under CERCLA remains unchanged until federal law is amended – which is unfortunately not yet in sight in a complicated political environment. In addition to that liability relief does not mean general relief. In the state of New York for example, protection is only granted in terms of the substances under investigation.

Clarity and flexibility in cleanup regulations are essential to reassure investors, developers and banks who intend to implement brownfield projects. New York State regulations have thus far failed with regard to reliable standards and liability – especially compared to other states such as Illinois and New Jersey. The result is doubly counterproductive. On the one hand the legal uncertainty weakens the position of the city in bargaining with potential investors. City officials cannot clearly state requirements on the scope of site cleanup. It is the other way around. The investor asks for security and demands that the city takes the uncertainty out of the planned project by investigating and remediating at its own expense.

Legal vagueness on standards and liability issues leads to clear discrimination against brownfield redevelopment in favor of the easy route, greenfield development. In the light of this gap in regulation, people display exaggerated caution on the most dangerous materials like asbestos. Unknown brownfield risks often provoke "asbestos psychology". The consequence is exaggerated precaution incommensurate with the intended use – espe-

cially in mixed-use projects. Children's playgrounds do not blanket the sites, not to mention the fact that "you don't eat the soil or drink the ground water"[51].

4.5 Restrictive Building Codes

Impediments to the reuse of derelict buildings may result from older building codes. Sometimes requirements only refer to new construction and therefore are not applicable to the very different situation of redeveloping an old facility. Harsh restrictions force investors to erect expensive structures and prevent them from saving costs by using existing structures flexibly. This is especially true for strict fire and safety regulations. Recycling of old buildings is often stymied by inappropriately high costs due to construction requirements[52].

4.6 Property Ownership and Information About Sites

Larger brownfield sites are often divided between several property owners. In practice this may turn into the most serious obstacle to urban redevelopment. In some cases the number of property owners exceeds 50 persons[53]. As a consequence, complicated legal questions regarding responsibility and distribution of costs may arise.

Integrating brownfield redevelopment into strategic planning requires availability of all pertinent information about quantity and quality of sites in the city. Sources of information are often dispersed, sometimes among different authorities. Sanborn fire insurance maps are a good source of information about the number and locations of brownfields in New York City"[54].

4.7 Lack of Administrative Cooperation

Complaints are heard about insufficient cooperation between environmental and planning departments. While planners find the attitude of environmental authorities too strict and inflexible and therefore an impediment to development, the ecologists often complain about the planning department being too lax about environmental concerns. This debate closely mirrors the disputes in German city governments.

4.8 Intermunicipal Competition

A serious problem often mentioned in the interviews and limiting the chances of concentrating on brownfield redevelopment is the tremendous competition between the cities and counties in the regions. Municipalities trying to improve their tax base compete for

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51 An apparently popular term for the problem, dropped in several interviews.
52 See examples in Bridgeport, Section 6.2, and Niagara Falls, Section 6.6.
53 See Chicago in Section 6.5.
54 Interview with *Greg Belcamino*, Acting Director of the Office of Environmental Coordination, New York City.

business and homeowners. Political pressure to evidence successful economic development and create jobs is not very compatible with complicated, long-drawn-out procedures of brownfield redevelopment. Quick decisions to fast-track investments are often tempting. In the light of a strong historical and constitutional municipal autarky, state planning law is often too weak to force municipalities into regional solutions or give incentives for strategic focus on inner-city redevelopment[55].

55 On the other hand see the approaches in the state of Maryland, Section 2.2.2, and in Portland, Oregon, Section 6.4.

5. Strategies and Approaches

The following items were mentioned as promising approaches to make brownfield redevelopment more effective in American cities[56].

5.1 Integrated Planning and Risk Management Strategies

There is much room for improvement in the chances for brownfield projects in the early phase of planning. A smart planning strategy has to be developed by integrating questions of reuse (which kind of reuse makes sense for the city's long-term development and goals?) risk assessment (e.g. financial risks, liability risks), market conditions (e.g. what will be the land value for the intended reuse, will it cover the environmental costs?) and financial resources (grants, funds etc.).

In developing a strategy to tackle all these questions, the cities play a key role as an intermediary between players in their neighborhoods and state or federal regulations and programs. Good planning is also crucial in order to devise arguments to invest in brownfields that will convince both the city (e.g. long-term increase of the tax base and improvement of quality of life through revitalizing and/or greening) and the investor or developer (e.g. access to funds, grants, incentives).

5.2 Improving Public-Private Partnerships

Closely related to the last point is improving PPP strategies. The cities play a decisive role in matchmaking between public and private players. Linking development and state authorities is of major importance. Many cities have gotten their act together, embedding brownfield redevelopment in a comprehensive plan for the city's future. They have become more proactive and more selective in deciding which use will be most compatible with long-term municipal perspectives. This point is also relevant for project acceptance and profitability. Redevelopment for short-term profits (like the third duplex cinema in the neighborhood) may yield new abandoned or at least underutilized sites in the future.

5.3 Clarifying the Business Perspective

A strong, still unharnessed driving factor is the explanation of the economic benefits of revitalizing abandoned sites, especially from the city's perspective. It must be made more apparent that redeveloping inner-city areas will pay off by increasing the tax base, raising and stimulating quality of life and consequently attracting more business and human resources in the long run. Some amazing examples show that brownfield redevelopment can enliven run-down industrial areas, give them nostalgic charm and attract a number of companies and people[57].

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56 Apart from interviews with city planners the following approaches were discussed with *Charlie Bartsch* in the Northeast-Midwest Institute, Washington DC.

57 See examples in Baltimore and Portland, Sections 6.3 and 6.4.

5.4 Targeted Financial Incentives

Financial programs alone won't succeed in attracting investments in brownfields. Tax incentives are a major tool in lowering redevelopment costs and increasing chances for brownfield reactivation as opposed to greenfield development.

There is further need for targeted financial incentives. Some states have developed innovative approaches to lure investors with tax reductions, abatements and transfers[58]. Some of the best incentives can be found at the municipal level. Flexibility in legislation that allows the cities to offer tax incentives has proved to be a driving factor in making brownfield investments economically enticing Numerous examples prove that tax incentives are definitely able to create "win-win-situations" for the city and the investor[59].

5.5 Liability Protection and Insurance

Liability protection for investors and developers is one of the main instruments in various state programs to make brownfield redevelopment more attractive. Protection is offered if requirements for site investigation and cleanup standards are met[60]. Liability issues are closely connected with the insurance market, a relationship that is just about to take effect in German brownfield management. Insurance for brownfield redevelopment has grown in importance in the U.S. during the last 5-8 years. Insurance companies see a new market since developers and investors are implementing projects on brownfields. Low estimates of the risk of excessive costs for insurance prevail because technology and methods of investigation have improved in recent years[61].

5.6 Procedures and Project Management

The success of brownfield policies hinges on moderation of the conflicting interests. An important aspect is establishing an intergovernmental dialogue: the different authorities on the federal, state and municipal levels have to be integrated in the process to harmonize interests and requirements for the project. The moderator should be an expert in brownfield strategies and know the different stakes involved and be able to orchestrate acceptable compromises.

Intergovernmental approaches can be found e.g. in the New Jersey program where different departments formed a task force on brownfield issues[62]. And in New York City for instance the relevant authorities and investors try to reach an agreement fixing the obligations of the investor concerning the site. This agreement is sought at the earliest possible stage.

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58 See examples in New Jersey and Illinois, Section 2.2.
59 See details on state programs in Section 2, on municipal programs in Section 6.
60 See Section 2.
61 Interview with *Greg Belcamino*, Acting Director of the Office of Environmental Coordination, New York City.
62 See Section 2.2.1.

5.7 Public Participation / Community Involvement

Public participation and community involvement play a much greater role in American brownfield redevelopment than in Germany. There is a consensus that participation should take place at an early, conceptional stage, when the project has not yet become a *fait accompli*.

EPA also sees community involvement as a necessary step to be taken at the earliest possible point in the procedure. This applies particularly to CERCLA, the Superfund Law on the most severely polluted sites, which requires an early public hearing[63].
It must be stressed that the community serves as an important source of first-hand information and sometimes provides expert input.

Good things have often happened when the community was involved early in the game. But, of course, there have also been difficult cases in which moderation failed. Moreover civic participation harbors the risk of instrumentalization of rights that can block projects. There have also been cases where participation took place after the project had already reached a stage at which it could not be prevented or substantially modified. In these cases participation was little more than a rubber stamp. This could create hard feelings against the initiators and leading implementers of the project Resentment about being heard too late will not promote the necessary community acceptance and could threaten implementation of the project in the long run, at worst after huge amounts of time and money have already been invested[64]. We also learned about cases where community involvement was exaggerated and became irrational or paranoid on contamination issues[65].

The "public environmental review process" has turned out to be a very complicated procedure. Many aspects such as remediation standards and concerns of residents on the crucial question of "how clean is clean?" have to be coordinated in the process of developing a brownfield project. Developers entrust more and more to consultants in the brownfield redevelopment process. From the city's point of view the quality of the consultant's expertise is often debatable. Therefore many hours work have to be dedicated to reviewing expertises[66].

However, in the long run acceptance will be increased, and the risks of litigation initiated by citizens who don't feel integrated will be minimized. Showcases demonstrate that solutions can be found thanks to which the community, city government and developers made mutually satisfying compromises.

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63 See "EPA Superfund Community Involvement Program" in Section 2.1.
64 This is the experience of New York City's Department of Housing, Preservation and Development.
65 See the tales of a developer in Section 7.
66 Interview with *Jerylin Perine*, Commissioner of the Department of Housing, Preservation and Development, New York City, and staff members *Sheila Machado, Helen Gittelson* and *Walter Robbins*.

5.8 Success Stories as Impulses

Success-stories have been a strong impulse in American urban development. Mayors who ″look over the fence“ and see projects improving another city’s tax base and quality of life while creating a slew of new jobs will be strongly motivated to jump on the band-wagon. Successful projects of that kind can be sold to politicians – the brownfield issue can be a means of improving voter appeal.

6. Brownfield Redevelopment in U.S. Cities – Strategies, Instruments and Showcases

The following section focuses on specific city approaches in brownfield redevelopment. Some of the cities visited were nominated as showcase communities for the EPA Showcase Communities Program. Most of them – Glen Cove, Baltimore, Trenton, Chicago and Portland - have qualified for the program. Buffalo is a member of the Niagara Falls/Niagara County showcase, which was established in October 2000[67].

6.1 Glen Cove, New York[68]

The city of Glen Cove, once mainly farmland, developed into an small industrialized city. Its nice location on the Long Island shore used to make Glen Cove a cozy resort where wealthy New Yorkers could get away from Gotham's hubbub and relax for a while. Several firms located on the bank of a creek. In the course of industrial change in the 1970s and 1980s the owners abandoned the sites, some of which were severely contaminated, causing major problems for the waterfront environment. An old weapons firm, which had also worked for the space program, left some radioactive traces and materials which it had dumped in a landfill directly on the waterfront. This site is part of EPA's Superfund Program.

- Motives and Strategies for Redevelopment

The city began to purchase sites along the waterfront for redeveloping. Investigations and assessments were conducted with the help of EPA grants and state monies. The cleanup is still in progress.

The city has several motives for redeveloping its waterfront area:
- Enhancing the image of the city and becoming an attractive resort again,
- Increasing tax revenue and improving the city's quality of life,
- Creating new jobs through new investments on the brownfield sites.

The aim of reshaping an attractive seashore city will be achieved through different projects. A bayside hotel and a new ferry terminal are planned. A high-speed ferry will whisk people to Manhattan in 45 minutes. This is not merely designed to be an alternative to commuting to New York City by car or train. It is also conceived as a tool to encourage people from New York City to spend a short vacation in Glen Cove. The marina shall be expanded to accommodate more local citizens and tourists and feed them in restaurants facing the bay. City planners want to avoid creating a new leisure attraction at the expense of the downtown district. The two areas will be connected and improved together.

It is important to note that city officials and, most importantly the mayor himself, strongly identify themselves with the motives and strategies mentioned above. This forward-thinking attitude makes it possible to maintain a united front and take distinct positions in

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67 More on EPA Showcase Communities at www.epa.gov/brownfields/slocat.htm.

68 Based on an interview in the Glen Cove Community Development Agency (*Rosemary Olsen*, Executive Director, *Myralee Machol*, Project Coordinator).

negotiations with potential investors. City officials understood that redeveloping Glen Cove by revitalizing its strengths and traditions is the only way to sustain a bright city future. They clearly see that they "would miss the boat if they didn't think that way"[69].

- Taxes

Boosting the city's tax revenues is one of the major forces driving brownfield redevelopment in Glen Cove. City officials have grasped the fact that abandoned sites are not only eyesores and blemishes in the city's image but also untapped resources giving the city great leverage for improving its prosperity. Developed land will increase real estate taxes enormously, and the city can use the windfall to accomplish all kinds of municipal objectives. The sites as they are are worth nothing to the municipality. On the contrary: doing nothing is counterproductive because potential investors and visitors will not be attracted to the city.

6.2 Bridgeport, Connecticut[70]

Bridgeport is the biggest city in the state of Connecticut. It is the main municipality in a surrounding region that is home to 25 million people. Bridgeport enjoyed an industrial boom in the 1930s and 1940s. Industry and banking enhanced the city's image. Development followed transportation routes along rail and road lines, harborfront, river and canals. Growing wealth nurtured the development of suburbs in the late 1950s and 1960s. During the 1970s Bridgeport, like other U.S. cities, was plagued by rising social unrest, racial conflicts and heavy rioting. This instability – demonstrations, downtown fires, muggings – drove many firms out of the city as conducive business conditions could not be guaranteed. As a consequence, Bridgeport lost 35,000 jobs; the rate of unemployment rose dramatically. Many of the sites industry left behind were heavily contaminated (especially with oil, asbestos and lead).

In the late 1980s and particularly in the 1990s new programs started to redevelop and revitalize the city. A close look was taken at the city's brownfields located on the waterways and the harbor. They determine the city's image for those who go on first impressions.

Redevelopment has been going on for about nine years. Consistent government support has been a boon to the city's strategy. Bridgeport is the medical center of the region. Furthermore the city retains a considerable work force. These are two of the many factors which make the city a suitable business location. The city is now focusing on three sectors: high-tech, computer-related industry, finance and insurance services, and real estate. Bridgeport is seizing the opportunity to offer office space for corporations searching for cheaper ground than sites nearer their headquarters, mostly around New York City.

After being close to bankruptcy 10 years ago the city has basked in the sun of the significantly rising amount of investments within the last decade. Bridgeport picked itself up by

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69 *Rosemary Olsen* in an interview.

70 Interview partners in Bridgeport were *Michael P. Nidoh,* Director of Planning in the Office of Planning & Economic Development; *Brian Gockley,* Program Director, Groundwork Bridgeport.

its bootstraps and is willing to move forward: "We have to invest in our own infrastructure before we can expect investors to invest in us"[71].

- Redevelopment Motives and Strategies[72]

A major motive for redeveloping the city's brownfields is enhancing the quality of life in Bridgeport. The city is eager to improve its image as an essential selling point for investors thinking of locating there. One way to make the town a more livable and attractive place is "greening" the city. To improve economic development the city has established an Economic Research Center, which explores the situation in the region and tries to attract potential investors to Bridgeport. The center not only makes an effort to find new investors. It also endeavors keep existing firms in town and encourages them to expand locally.

The city pursues an aggressive strategy of chasing down grants and other support from. federal and state sources. Bridgeport is one of the cities in the EPA Brownfield Pilot Project program[73]. To accommodate investors, the city tries to be flexible in terms of cleanup standards. Bridgeport gives developers more certainty by agreeing with them to limit cleanup to levels corresponding to the planned use (e.g. lower levels for industrial or commercial purposes than for housing).

- Tax Incentives

The city uses tax incentives as a very important instrument to attract investors to brownfield sites. Tax abatements are given, especially to hire people and purchase machinery. Another instrument is deducting environmental costs for investigation and cleanup from the tax the investor normally has to pay. Investors have the possibility of obtaining additional tax relief from the city. Bridgeport avoids deficits in financing other municipal problems by recouping the loss of tax revenue in the form of state reimbursements.

- Environmental Law, Liability and Standards

Sometimes insufficient cooperation between environmental and planning agencies can hinder the process of redeveloping brownfields. Enforcing regulations standards formally and restrictively being too fussy in granting approvals can be counterproductive if the law provides for flexibility. It is unwise to prevent project implementation, although they would promote economic development through productive reuse *and* improve the environment through remediation. Better cooperation between the relevant departments is essential if redevelopment of contaminated sites is to move forward substantially.

Waste management is a serious topic in Bridgeport. Recycling programs are conspicuously absent, except for a few small items like aluminum cans. With regard to contaminated soil, the lack of capacity to dispose of or recycle materials from demolished facili-

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71 *Michael P. Nidoh* in an interview.

72 See also *The Bridgeport Brownfield Pilot Project, Final Report,* December 1996*; Greater Bridgeport Regional Planning Agency,* An Informational Guide to Local and Regional Economic Development, City of Bridgeport, Connecticut, November 1995.

73 See www.epa.gov/brownfields/html-doc/ss_brdgp.htm.

ties is not a major issue yet. But it is viewed as a major obstacle to brownfield redevelopment in the near future.

The 1975 Transfer Act is a major handicap. Property owners are held primarily liable even if they did not contribute to the contamination. This obviously blocks investments on brownfield sites. As a matter of fact, brownfields projects are only possible with heavy subsidies from the public sector.

Building code amendments are required. The code was drafted with only the construction of new rental facilities in mind. So its construction requirements are unsuited for redevelopment projects. New Jersey law is a fortunate exception: the regulations are tailored to the circumstances existing on the site ("What is there is there!") and requirements have to be met on the basis of reality.

- Public Participation

Bridgeport emphasizes community involvement in redeveloping brownfields. The city truly believes that the neighborhood has to be consulted and that a top-down planning process cannot achieve acceptance. This bottom-up approach is personified by "neighborhood coordinators" and epitomized in the concept of "groundwork." The latter is an EPA initiative copying an approach in England and helping small agencies become established and work on specific, smaller abandoned sites in the communities. At present three cities have groundwork agencies, but more are in the pipeline. The professional skills needed by a neighborhood coordinator do not necessarily involve expensive education, "just plain common sense", which reveals the down-to-earth-attitude and the ability to moderate which is required to foster cooperation and facilitate compromises.

6.3 Baltimore, Maryland

The Baltimore Development Corporation (BDC) plays a major role in the redevelopment of the city's brownfields[74]. BDC is a quasi-public agency funded by the City of Baltimore. City officials are members of the board of the agency. BDC has dealt with brownfield redevelopment since about 1995. The corporation cooperates with developers on the revitalization of Baltimore's waterfront, with a special focus on locating New Economy ("Digital Harbor")[75].

The city has hardly any more greenfields to develop. Therefore brownfield redevelopment is more or less automatically an item on the city's agenda. In 1997 the state enacted new legislation to promote recycling of abandoned sites. Until then a great deal of uncertainty existed, especially on liability questions. Banks refused to loan money for investments that potentially entailed cleanup liability. In 1995 there were almost no financial incentives for the reuse of derelict industrial sites.

The State Voluntary Cleanup Program was launched in 1997. The main reason why it is running well up to now is that it offers a full liability exemption for purchasers and good protection for lenders. However, it is difficult to integrate smaller businesses on smaller

74 The BDC interview was with *Evans Paul,* Director, Brownfields Initiative.
75 See also *Baltimore Development Corporation,* Revitalizing Baltimore, 1999 Annual Report.

sites into the program. Further support comes from the Community Reinvestment Act, enabling the EPA to give credits and access to additional sources for municipal loans to investors.

The resources mentioned above are efficiently utilized in Baltimore's redevelopment. Federal and state brownfield incentives are combined as well to increase the impact of the different incentives on the local level. For example, tax credits are given for preserving historic buildings and integrating them into the redevelopment plan.

The city plays the role of a facilitator. All in all, there are few disagreements on brownfield strategies. A consensus appears to have been achieved on the requirements for a policy to revitalize Baltimore's abandoned sites and neighborhoods following severe industrial decline in the 1970s and 1980s. Teams representing public and private players meet more or less regularly to discuss projects of present or future relevance.

BDC maintains an inventory of sites but is not taking many proactive measures on its own to induce business to locate there. Most of this task is handled by regional marketing agencies which cooperate with BDC.

An example of successful revitalization can be seen in the Canton District on the Baltimore waterfront. This formerly depressed neighborhood is now a lively district with mixed use which has been revived by residential and commercial development. It is the setting of one of the first brownfield success stories, the Can Company Project. A book store with a cafe now uses the former main factory building, preserving its old exterior and interior architecture. Another remarkable project is located in a neighboring factory building: Several small New Economy firms occupy offices and pay low rents. This start-up support for young companies was made possible by rent subsidies from the city in a public-private partnership with the owner of the building.

6.4 Portland, Oregon

- Portland's Brownfield Approaches[76]

Portland is an old port city with a number of brownfield sites, particularly along the waterfront and on railroad lines. It also has two Superfund sites. The main challenge for the city involves sites which fall in between those which are highly contaminated or unattractively located (only public money is available for cleanup) and those which are easily marketable (private investors will profit despite cleanup costs). Public-private partnership strategies must be developed to deal with the intermediate category In the meantime the city is taking an area-wide approach to the issues and incorporating its brownfield redevelopment policy into strategies to revitalize whole neighborhoods and districts[77].

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76 The interview partners, *Douglas MacCourt* and *Claudia Powers*, work as environmental lawyers counseling the public and private sector in a Portland law firm. They were heavily involved in the creation of brownfields programs for the city of Portland, *Douglas MacCourt* was formerly Director of the Portland Brownfield Initiative. *Claudia Powers* also consults the private sector on brownfield topics.

77 For details see *City of Portland,* Portland Liveable Community Showcase, Portland Brownfield Initiative, Building Sustainable Communities Through Brownfield Redevelopment, Resource Kit; see also *Bridgewater Group Inc.,* Portland Brownfields Initiative, Review of Action Plans, March 1999.

Concentrating on inner-city renewal and promoting brownfield redevelopment is facilitated by the "growth boundaries" which allow new development only in certain zones (see the following section abut METRO).

A major topic for urban and regional development is the interdependence of land use and transportation issues. The city tries to tap the financial resources of the Federal Highway Agency and the Federal Department of Housing and Urban Development (HUD) in order to integrate its brownfield projects. Tax incentives are also employed, but they must compete with greenfield incentives so that they provide insufficient encouragement for sustainable, land-conserving urban development.

Successful implementation of projects in the Portland metropolitan area requires a consensus among four main players: city government, Tri Met (public transit), METRO (the regional planning body issuing binding planning directives) and the state of Oregon. Bigger brownfield projects have to be integrated in long-term development and transportation strategies. The restrictions on developing outlying areas increases real estate prices in the city. This makes investments in inner-city brownfields more attractive for developers. On the other hand the problem of residents who cannot afford higher rents must be taken seriously. Subsidized housing has to be considered in weighing up development projects. However, it is not easy to pursue a sustainable approach in urban development. The concentration within the inner boundary is permanently criticized by business people, who claim it is an obstacle to development. This issue is the subject of "constant vigilance".

There are several brownfield projects – finished, in progress and planned – along Portland's waterfront and on old railway sites. It is most impressive to see the revitalized Pearl District. This old warehouse district close to the waterfront and to downtown now hosts high-quality but also subsidized housing. From the architectural point of view the success of this social mix may be seen in the question of a former visitor mixing up the social housing and the expensive apartments. In addition, the new buildings pick up and play with the old brick character of the old buildings. Furthermore shops, bars and restaurants lend this district a trendy charm.

- Portland's Regional Approach – The Portland Metropolitan Area (METRO) and the Growth Boundary Concept[78]

About 1.5 million people live in the Portland metropolitan area. The area economy is booming. The port is an enormous economic factor, shipping huge amounts of farm products. Last year sales through the port, especially of farm produce, were estimated at $750. Portland hosts a growing number of New Economy firms whose managers appreciate the high quality of life in the metropolitan area. The boom is also mirrored in the population growth, estimated at 2.5 – 2.6% per year. The rate of unemployment is about 4%. The older cities in the area, where brownfields are located, are Portland and Oregon City.

METRO is a regional authority, a planning body consisting of 27 communities in the Portland metropolitan area. Its chief executive is elected directly by the 1.5 million inhabitants of the metropolitan area. Thus he or she has the direct legitimacy, which is nec-

78 The interview was with METRO Chief Executive *Mike Burton* and *Barbara Linssen*, Associate Regional Planner at METRO.

essary because METRO is able to overrule municipal land use and transportation planning. The authority can enforce its decisions, for instance by making municipalities change their building codes. METRO is the Portland-area watchdog, ensuring "wise land use" and smart transportation plans.

State law[79] establishing the Oregon Statewide Planning Program of the Oregon Department of Land Conservation and Development requires municipalities to develop a comprehensive plan, some sort of a "general municipal cookbook for future development" defining growth boundaries. For the METRO area the boundary will be maintained for 20 years (up to 2017). There are high legal barriers to moving the boundary farther out. In fact, it has to be proved that there is no other chance for development, no other land available inside the perimeter, for the development in question.

METRO has the right to step into the planning process of a municipality when plans conflict with METRO guidelines for land use and transportation. METRO has the controls to enforce compliance. State law also gives METRO the right to sue municipalities if they violate guidelines. Twice a month representatives of the municipalities meet to discuss development projects and make decisions. These talks serve as transparent debates which establish the priority of projects that are important for the region. Distribution of monies and funds from the state and federal government is a topic at the meetings.

Federal money, especially transportation dollars as a main source for infrastructure going beyond highway construction, goes through METRO and not to the municipalities directly. This forces METRO members to reach multilateral agreements, giving METRO – the chief executive and seven counselors – the opportunity to coordinate, moderate and facilitate the discussion according to its guidelines for sustainable land use and transportation issues. For example, projects along existing transportation lines are ranked higher in the competition for federal transportation dollars. The intermunicipal task force balances the conflicting interests of the various cities.

Oregon's tax system apparently reduces competition between the municipalities. There is no city sales tax, only property tax. The state imposes further legal limitations on municipal taxation. Development in already built areas is encouraged, especially along transportation lines where public investments have already been made. Furthermore, incentives are given to developers who build in these areas, e.g. a bonus for more density, i.e. more floors for projects in city transportation or transit centers. More grants are available for projects in transit center areas. On the other hand, support is denied to projects outside the target areas. In addition, options consuming more land are restricted anyway because of the growth boundary. Although there are no specific guidelines for brownfield redevelopment, METRO focuses sharply on redevelopment of inner-city areas because of the already existing infrastructure and to conserve farmland. Thus, the brownfield issue gains a high profile in municipal planning.

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79 For further information about the Oregon Recycled Lands Act of 1995, its provisions, instruments and incentives and about Oregon's Voluntary Cleanup Program see *Richard Glick*, in: Todd Davis and Kevin Margolis (Ed.), Brownfields, A Comprehensive Guide to Redeveloping Contaminated Property, 1997, p. 557 ff.

6.5 Chicago, Illinois

- Brownfield Approaches in Chicago[80]

Brownfield redevelopment is an important political issue for the mayor. His goal is to keep companies and jobs in town. Brownfield redevelopment is understood as a means to increase the city's tax base. There is also a sociopolitical aspect: run-down sites are adversely affecting the neighborhoods because they often become the scenes of gang-violence, drug abuse etc.[81].

Brownfields are mainly located in urban areas, whereas most Superfund sites are situated in rural areas. The city of Chicago is the focal point of the State Voluntary Cleanup Program[82]. Problems in handling the brownfield issue exist in smaller towns and in rural areas which lack the necessary resources to tackle them properly. On the other hand, there is a tendency to "develop speculatively": more cities remediate sites in advance to be ready for potential investors when the time comes. Some smaller cities are particularly active in employing this strategy.

The Internet is another avenue used to attract investors to developable sites. Several brownfield websites contain all the information a developer needs to decide to swing into action. The biggest redevelopment successes were reached because the projects matched and were integrated in a medium-range city vision. Brownfield projects vary greatly and different sources of funds, grants etc. are used as the situation dictates[83]. Strong public involvement is seen as one of the essentials for successful redevelopment projects.

From the strategic point of view, tax incentives play a major role in attracting investors to brownfield sites. But competing incentives for greenfield projects are a problem. The tax increment and finances (TIF) approach (see the following points) was supportive in many projects. However, HUD loans have to be repaid, of course. This reduces the city's scope for offering tax abatements.

There is still uncertainty on the liability question although the state program offers protection for lenders and owners who have not contributed to the pollution of the site. As a rule EPA only gets involved when the agency invests federal money in the site. Contacting EPA is then required and possible solutions are discussed with EPA project managers.

Showcase communities see a big advantage in having an EPA expert working with the city for a year. The greatest plus is the expert's help in obtaining information and access to federal grants and programs.

In Chicago the initiative to redevelop brownfields usually comes from the Department of Planning when it requests environmental screening of the sites to be developed. The

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80 Interviews were made in the Chicago Department of Environment (*Kelly S. Kennoy*, Director of Environmental Services) and in the Chicago Planning Department (*Bob Kunze*, Deputy Commissioner); a meeting and an excursion were organized by EPA Region 5 (*Jim VanderKloot*, Urban Environmental Manager; *Joseph Dufficy*, Brownfield Program Manager; *Brooke A. Furio*, Brownfield Program Manager).

81 See also *City of Chicago*, The Chicago Brownfields Forum, Recycling Land for Chicago's Future, Final Report and Action Plan, November 1995; *Action Projects Progress Report*, May 1998.

82 See Section 2.2.3.

83 *Brooke A. Furio*: "I have never before seen a project which took the same approach or used the same variety as this one."

mayor's office and the offices of the aldermen also launch initiatives. The city Environmental Department handles EPA and state funding. It has the task of bringing the different resources together and allocating them to specific projects. The department usually starts the project within the *Voluntary Site Remediation Program (SRP)*[84]. The main goal is to get a "No Further Remediation Letter" (NFRL) from the Illinois Environmental Protection Agency (IEPA) as early as possible. This reassuring letter provides definitive cleanup guidelines and standards. SRP is seen as a very practical program because it relates the cleanup standards to the intended use. SRP supports the new owner of a site in many ways. NFRL also offers protection against liability as long as the guidelines and followed standards are met. This also applies if something unexpected is found on the site. As long as the purchaser did not know about or is not responsible for the contamination, the authorities will not sue because of NFRL. The case is settled amicably between the state, the city and the owner.

State and city officials cooperate smoothly to clarify cleanup requirements as soon as possible. This gives potential investors a high degree of certainty. On this basis, consultants can be retained to work out site specifications along the guidelines established by the agencies.

By now experience in remediation technologies and procedures has reached sufficient sophistication that potential risks don't really scare investors away from brownfields as long as funding and liability issues are appropriately handled.

- City Planning Obstacles

The tight time schedules sometimes create problems. Pressure comes from the developers, who want to recycle the property quickly. But advanced cleanup technologies take longer, and the Environmental Department wants them used. If politics are also involved, conflicts between time schedules, assessment and cleanup standards and technologies may arise. Compromises have to be found.

All in all, the environmental piece is often seen as the easiest part in the process. Site ownership may be a thornier problem. Many people deem this to be the most difficult issue. Huge sites may involve as many as 40 or 50 owners. Gaining rights to the whole property becomes a major undertaking. Difficult property law questions have to be answered.

A major problem is finding suitable properties of the required size because of the high number of different owners. In this respect, the planned TIF-districts (see below) are helpful. They can be supportive in assembling properties that are big enough to satisfy investor demands.

- Tax and Finance Incentives[85]

The Department of Planning is taking a strategic approach and treating brownfields as part of a larger industrial redevelopment program. After tremendous shifts in industrial

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84 See Section 2.2.3.

85 Interview partner on this particular aspect was *Bob Kunze*, Deputy Commissioner in the Chicago Planning Department.

sectors and structures the question for the city was where it should focus its industrial development. Planners designated 22 industrial corridors, including a number of brownfield sites. The next step was to develop strategic plans, focusing on the question of what was needed to attract new business and keep established industries in Chicago.

In each corridor business groups were formed. The city is closely cooperating with them to build an area plan. Chicago uses different incentives, especially taxing and financing tools, to improve the industrial climate. Special districts were designated where specific fiscal and financial incentives can be employed. In most of the corridors tax and finance districts were established.

The tax system works as follows: Property taxes from the districts can be frozen. When the property value rises above the ceiling, taxes can be split. The amount exceeding the frozen base is used only on district programs – as a means of reallocation. This model is called "tax increment and finances" (TIF)[86]. State law enables the cities to use TIF. The money that goes to the district this way can be spent to defer two broad categories of expenses: infrastructure (roads, sewers etc.) and grants to investors or developers. Thus TIF can be tied to brownfield issues and the revenue can be used to cover cleanup costs. Developers can be reimbursed.

As TIF money only flows when property values rise over the frozen base, the city has to be resourceful to get money up front. A major source is HUD money from the Community Development Block Grant Program. The city borrows from HUD. Then TIF is used to repay these loans. The city uses loans to develop industry. As a result, revenue increments come from industry, enabling the city to repay the HUD loans. Apart from TIF, several tax abatements are offered. Investors can also qualify for tax deductions for assessment costs.

Chicago also reserves areas for industrial development in attractive locations near the city, preventing landowners from using the property for other purposes, for example for residential use. The city cannot rezone these areas as easily as other neighborhoods.

6.6 Niagara Falls, New York

- Brownfield Approaches in Niagara Falls[87]

The city of Niagara Falls has about 58,000 inhabitants. The city and the surrounding region have been hit badly by industrial and derivative social decline. Various industrial activities (e.g. mineral manufacturing, production of chemicals and batteries) abandoned many brownfield sites. The official rate of unemployment is almost 15%, but there are also large numbers of underemployed people working in jobs below their skills. In addition, around half of the city's population is dependent on government welfare.

In 1997 the city started an initiative to redevelop and revitalize brownfield areas. The Department of Planning managed to get Niagara Falls accepted as a brownfield pilot in

86 More about TIF in the brochure of the City of Chicago, *Industrial TIFS – Making Neighborhoods Come Alive*; see also www.ci.chi.il.us.

87 *Tom DeSantis*, Deputy Director of Planning, City of Niagara Falls, and *Edmund P. Sullivan*, Brownfields Coordinator, Niagara County, were interviewed.

the EPA assessment program. The city received $200,000 to investigate site contamination. Further support came from HUD, $500,000 from the Community Development Block Grant Program, mainly to support projects of the Neighborhood Revitalization Committee. This committee was founded at the very beginning of the planning process to implement a concept of deliberate, early and active community involvement. In the meantime the committee works nearly independently – sometimes a little too autonomously in the city's point of view – and gets assistance from the municipal department.

To determine business needs and opportunities economists were instructed to conduct a market analysis. The city also gave $5,000 grants for start-ups of "microenterprises" In addition, business training is organized for community residents.

These instruments are part of a "community empowerment" concept: "We switched from brownfield redevelopment to community redevelopment[88]." Thus brownfield programs functioned as a catalyst for a broader revitalization of participating neighborhoods. The city's medium-range objective is establishing comprehensive community building, especially along the waterfront.

- Incentives

Financial incentives could be given through a state program administrated by the city offering sales tax waivers, tax credits, loans and cheaper electrical power in designated economic development zones.

- Obstacles

A major barrier for brownfield redevelopment is the tremendous competition between the cities and counties in the region. This competition, based on a strong historically and constitutionally anchored municipal autarky, causes further sprawl and cries out for regional cooperation. State legislation is considered necessary to remedy this situation, but optimism is not running high. (International) cooperation between counties and the U.S and Canada focuses mainly on watershed matters protecting fishing in the border region.

Further obstacles result from the restrictive state building code, especially strict fire and safety regulations hindering reuse of old buildings because of unusually high costs for meeting reconstruction specifications.

The city also faces liability problems when executing tax foreclosures on potentially contaminated properties. The city is held to account either as the new owner of the site or as the authority responsible for potential health hazards from the property. On the other hand, liability is "more like a potential deterrent than a real one[89]" for developers and investors. Most of the contamination turned out to be less severe than expected. But from the developer's perspective, the time limit is the crucial point. As long as there is a risk of liability actions – in Superfund cases growing into "lawyers' festivals" – uncertainty still scares developers away from investing in brownfields. The calculation shows that two projects could be carried out in the time of one complicated brownfield recycling (opportunity costs) and makes it economically sound for many investors to choose the easy

88 *Tom DeSantis* in the interview.
89 *Tom DeSantis,* in an interview.

way on a greenfield – unless they are committed to the idea of brownfield redevelopment and accept a challenge in order to do something for their community[90].

6.7 City and Region of Buffalo, New York

- State Programs and Regional Strategies[91]

Statistics show that the New York State Voluntary Cleanup Program dating back to 1996 is rarely used – about 100 times in the last four years. Some people conclude that major developers forge ahead, ignoring the authorities, taking the risks into their calculations and creating *faits accomplis*.

In 1996 a new State Bond Act Program was established. It offers $200 million for municipally addressed environmental restoration, with 75% of the money coming from the state, the rest from the municipality. Furthermore this program improves liability protection by substantially limiting "reopeners". As far as third party liability is concerned, state agencies play the role of insurance companies. However, the program does not contain differentiated cleanup standards based on intended future reuse.

The Buffalo-Niagara Falls region is still suffering from the tremendous industrial and social decline in the late 1960s, 1970s and 1980s. As a consequence the tax base is highly dispersed, thousands of people have left the region and young people still lack career perspectives. The city of Buffalo had a population of 600,000 at the end of the 1950s. The figure has fallen to about 280,000. There are scores of brownfields, many of them huge and heavily contaminated. Two of the major Superfund sites are located in the South Buffalo district alone. This dire situation makes it hard to be generally optimistic. The South District City Council member who is in charge of urban redevelopment puts enormous energy and personal dedication into approaches to revitalize brownfield sites and affected adjacent areas. Apart from numerous efforts to convince potential investors to take a chance on distressed parts of the district, public-private task forces have been organized[92]. It is a sheer impossibility to stimulate sufficient commercial demand for the huge supply of abandoned sites. One way to tackle this gigantic problem may be remediation as a kind of "land banking".

On the other hand, the region's international setting offers chances for redevelopment. Beyond the seriously polluted industrial areas the region boasts beautiful natural landscape with Niagara Falls as a premiere tourist attraction. These features are specifically addressed in a three-pronged mid-term strategy.

First, a regional approach has to be taken to reactivate international trade and distribution (railway and shipping) along the Niagara frontier and the canal between the Lake Ontario

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90 See the example in section 7.

91 The interview partners in Buffalo were *Robert G. Shibley,* Professor of Architecture and Planning, School of Architecture and Planning, State University of New York at Buffalo; *Robert. S. Berger,* Professor and Director of the Canada-U.S. Legal Studies Centre, University at Buffalo Law School; *Lucy Cook,* City of Buffalo, Office of Strategic Planning/Comprehensive Planning; *Mary Martino,* South District Council Member, City of Buffalo Common Council.

92 Talk on an excursion with *Mary Martino,* South District Council Member, City of Buffalo Common Council.

and Lake Erie. Second, the region must again project the image of cultural heritage in order to attract softer forms of nature tourism. And third, efforts have to be made to keep business in the region and individual neighborhoods[93].

Apart from giving non-profit organizations an active role in brownfield redevelopment[94] a crucial facet of this strategy is improving the region's quality of life. This is understood as an instrument to enhance the "soft" economic location factors and attract the New Economy or, for example, venture capital firms. A green belt is planned along the river, forming an industrial park landscape. The Emscher Park International Building Exhibition (IBA) in the German Ruhr district - an old coal mining region with scads of abandoned pits, factory buildings, blast furnaces etc. - serves as a model for this approach. Another idea is to open the local wine country to tourists and promote vineyard products in the cities (through wine festivals etc.).

Everyone acknowledges the need for regional and international cooperation to accomplish these goals, but cooperation still takes a back seat to selfish economic interests. Networking of all players is on the agenda. The University at Buffalo (UB) is already collaborating with strategic partners such as the Water Regeneration Trust, Toronto. In addition, the city and the county of Niagara Falls, the city of Buffalo and Erie County have formed a regional body called the Niagara Region Coalition. The coalition obtains UB support. This approach was rewarded by selection as an EPA showcase community in October 2000. But cooperation is hard to manage, considering that about 30 senior executives on the Canadian side and 80 on the American side of the falls are involved and have to be integrated.

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93 See *Robert Shibley and Beth Benson*, Rethinking the Niagara Frontier, A Report on the Bi-National Forum, March 2000.

94 See *Brownfield Action Project, University at Buffalo (Robert S. Berger et al.),* A Role for Non-Profits in Brownfield Redevelopment.

7. Experiences of a Committed (Re)Developer – A "Feedback Loop" for Brownfield Programs

The following report is a summary of an interview with a developer and his consultant in Portland, Oregon They see brownfield revitalization as a challenge and an opportunity to do something good for their city by expending a vast amount of energy to churn through a very complicated process. It should be mentioned at the outset that the time consumed in navigating the treacherous legal and funding channels on four different government levels would have been enough to complete two conventional projects.

From the developers' point of view, nearly all of the risk involved in reactivating a contaminated property rests on their shoulders. Theoretically, EPA funds were available, but they never materialized.

Some government programs work and some don't. One of the tricky points is that the different government programs – federal, state, county and city - have to gel. It is nearly impossible to meet all the different requirements. County councils are often wary about getting involved in brownfield issues. Some simply will not cooperate. On the city level, help was offered by a municipal task force in Portland temporarily managing brownfield topics for interested developers and speaking the "language of government" The project in question was chosen as a pilot project, which was crucial to its chances of implementation. The project could achieve the high density and mixed use the city envisions.

The city task force took care of obtaining EPA funds, but the regulations and requirements were very difficult to navigate. State and federal requirements differed, and the federal government did not always accept state requirements and refused to fund the project on those terms.

Cooperation between the different levels of government finally failed because there were no clearly defined top-down requirements. Even though cleanup standards corresponded to single-family residential use, the strictest at the state level – a number of additional reports were demanded and the streamlined reports given by the developer and the city were not accepted. Another requirement was paying union rates,- "Davis Bacon Wages", almost twice as high as the scale on the competitive market – and meeting minority labor quotas. The bottom line of these additional costs was the developer's conviction that it would be cheaper to explore other ways and means. Eventually the connection between the city and EPA broke down and the city decided to implement the project with the developer without federal support.

A serious obstacle was that EPA's Revolving Loan Fund (RLF) required an enormous amount of paperwork. The bank didn't have the staff to plow through the papers and tie everything together by the decision deadline. All in all, it is reported that there have been very few cases nationwide in which the EPA loan program – which has been running for seven years now – actually went into effect[95].

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95 See *Dana Joel Gattuso,* Revitalizing Urban America, Cleaning up the Brownfields, Washington DC (Competitive Enterprise Institute, CEI), July 2000, p. 10.

The good idea of RLF should be enhanced by a "feed back loop" to verify implementation. Still another problem is that RLF requirements are tied to CERCLA's strict Superfund standards. This is an insurmountable barrier for many brownfield projects.

The extent of community involvement has turned out to be another problem. Serious quarrels revolved around the question of whether a public library could be built on a contaminated site. The topic became a political issue for one year although the developer made it clear that the cleanup would meet the most restrictive residential zone standards. The city asked the developer to contact the neighborhood association and an associated land use committee. After this happened, more than a dozen public meetings were held for presentations to obtain neighborhood endorsement. The meetings became entangled over exaggerated risks. After a minor accident on the construction site the whole project was played up by the press. Ultimately the developer was so preoccupied with public relations management that little time remained for project development.

The lesson learned was that it is crucial to have "your bases covered", especially on the cleanup issue. The nitty gritty – designing, excavating, cleaning the soil – is considered simple. But the main problem is the paranoia about brownfield projects. This applies both to neighborhoods and to governmental agencies. Considerable misunderstanding is the result of apprehensions. All things considered, the strenuous effort to take the regulatory hurdles and the number of public meetings were totally out of proportion. In view of the number of people who got involved on the highest municipal and state political level, not to mention the numerous public meetings, the total amount of time is not warranted by the project in question. Bear in mind that this project was a small one and that the strictest standards were guaranteed from the beginning. The developer believed the project that took three years could have been completed with no higher environmental risks in about 18 months. There is something wrong when a development company is gradually transformed into a PR agency in the course of the project to get the job done.

It is hard to understand why a developer should have endure all this hassle rather than decide soberly and economically to do two easier projects in the same time. Normally one cannot expect developers' community spirit to drive neighborhood revitalization as it did in this case. From the developer's point of view it is of utmost importance to give investors incentives to decide to wade through all this red tape. Portland's growth boundaries policy – though it may be hard to maintain – is seen as a pillar of support for brownfield projects.

8. Summary

Knowing that a one-month-trip can only give a little insight into the years of work the interviewees have devoted to brownfield issues, this summary attempts to present some salient impressions.

Brownfield redevelopment in the U.S. seems to be a large step ahead of the debate and the situation in Germany. This applies to political strategy and to the instrumental level.

Strategically, redevelopment issues seem to have a higher profile in the political debate and policymaking. While in Germany the focus on redevelopment and revitalization of abandoned sites is still in majority the domain of political papers and demands, in the U.S. numerous federal and state programs address brownfield redevelopment promotion directly. In other words: in Germany the quantum leap from the political drawing board to a higher number of dedicated brownfield redevelopment programs is yet to come. It may be true that there are several national and European grants available to support brownfield redevelopment, e.g. from the *Grundstücksfonds* (Property Fund) in North Rhine-Westphalia and substantial (research) funds for brownfield topics from the government of Baden-Württemberg. But funding resources are mainly earmarked for individual fields such as housing, remediation and economic development. Targeted programs to bring abandoned sites back into productive use are rare.

Of course redevelopment abounds in cities which are very resourceful in marshalling different funds to revitalize underutilized sites. But the overall impression is obvious. There is a much stronger motivation and a clearer understanding of the benefits of redeveloping brownfields in U.S.-policy and practice. This assessment applies to different political levels: The federal government and several U.S. states have spent enormous sums of money on programs specifically addressing brownfield issues – with the reservation that not every federal program seems to be bearing the intended fruit[96].

It is interesting to speculate on the driving factors that made brownfields a political issue worthy of being endowed with substantial resources. This may be a bit sobering from an ecological standpoint but the driving factors seem to be mainly economic[97]. Even when the focus on redevelopment instead of consuming new land was environmentally motivated, the decisive arguments to translate the idea into political platforms or laws have usually been the negative economic impact of sprawl: growing taxes and other economic costs[98]. Apparently it became clear to state and particularly to local politicians that there is a strong economic return on having abandoned sites redeveloped. This becomes obvious if you consider the increase in tax income in the cities after brownfields were returned to productive use. Moreover, redevelopment seems to be understood better as an instrument of social stabilization in areas negatively affected by industrial and social decline.

Though German cities are making impressive efforts to redevelop their brownfield sites – according to a recent survey of the German Institute of Urban Affairs the topic is clearly

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96 See the experiences in Section 7.

97 Even the concept of "growth boundaries" in Portland, Oregon, was mainly designed to protect farmland, one of the regions economic mainstays. See Section 6.4.

98 See the genesis of Maryland's Smart Growth Program in Section 2.2.2.

of growing importance in urban development[99] – local politicians in Germany do not yet "buy" recycling as a vital issue to the extent that their American counterparts do. This is surprising because this issue obviously comprises economic, environmental and social aspects and therefore could serve as a highly visible arena to demonstrate political prowess to the voting public. However, a slight change could be in the making when one realizes that some German cities have subordinated their major brownfield projects to the city council or even the mayor's office.

All in all, one gets the impression that there is a broader political consensus among the relevant national stakeholders in the U.S. that brownfield redevelopment is a national strategy which deserves vigorous support. This attitude is sorely lacking in Germany but is needed to help put redevelopment into practice.

The second sphere mentioned at the beginning of this summary was the instrumental level. The variety of targeted instruments employed in America to get investors involved in abandoned sites is awesome. This applies especially to U.S. fiscal and financing tools. Subtle approaches, like incentives that make brownfield activities worthwhile, rather than strict legal obligations seem to do the trick most often. It has to be said, though, that competing subsidization of new land consumption is still common American practice. But federal and state law appear to give municipalities ample flexibility to create and use financial and tax incentives – another aspect which German decision-makers would be well advised to examine more closely.

These impressions should not be misconstrued as a plea for Germany to import the "American way". This summary focused on some remarkable approaches with which the researcher acquainted himself during his trip. One must bear in mind that sustainable or smart, advanced approaches in the U.S. are more of an exception than the rule. Successes in reducing and integrating land and traffic development as in Maryland's Smart Growth Program and Portland's "growth boundaries" are in the minority, if not unique.

However there are striking parallels between the U.S. and Germany as far as problems and challenges on issues of land use, redevelopment and sustainable urban development are concerned. For example, the plans of the Buffalo/Niagara Falls region to explore a new approach and promote a new identification by improving its quality of life as a base for future economic development are obviously comparable to the situation of regions in the eastern part of Germany. These are also languishing under industrial decline and facing the long-term perspective of having to redevelop numerous brownfields and finding a way to reorient and revitalize entire urban areas. Although underlying conditions such as political structures, planning and tax laws are different, and all tools may not be fully transferable, the ideas, strategies and approaches in brownfield redevelopment as one of the key current urban development topics definitely merit an intensified exchange between U.S. and German researchers and planners. We still do not really know what sustainable urban development is. So intensification of the transatlantic discourse is bound to help refine our definition.

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99 As an indicator 149 cities (58% of the cities approached) responded to the survey on brownfield topics, which was carried out between August and November 2000.

Appendix: Interviewpartners

New York City

Office of Environmental Coordination (Acting Director *Greg Belcamino*)

Department of Housing and Preservation and Development (Commissioner *Jerylin Perine, Sheila Machado, Helen Gittelson, Walter Robbins*)

U.S. EPA, Region 2 (*Chelsea Albucher*, Brownfields Coordinator and colleagues)

Glen Cove, New York

Glen Cove Community Development Agency (*Rosemary Olsen*, Executive Director*, Miralee Machol*, Project Coordinator)

Bridgeport, Connecticut

Office of Planning & Economic Development (*Michael P. Nidoh*, Director of Planning)

Groundwork Bridgeport (*Brian Gockley*, Program Director)

Trenton, New Jersey

State Department of the Environment (*Terri Smith, Larry Schmidt*)

Philadelphia, Pennsylvania

U.S. EPA, Region 3 (*Tom Stolle*, Brownfields Coordinator)

Washington, DC

Urban Land Institute (ULI, *Michael Pawlukiewicz*, Director Environmental Land Use)

United States Conference of Mayors (*Judy Sheahan*, Brownfields Program Manager)

EPA Superfund Office (*Melissa Friedland*)

EPA Brownfields Office, International Activities (*Dale Medearis*)

EPA Brownfields Office (*Karl Alvarez*)

Northeast Midwest Institute (*Charlie Bartsch*, Senior Policy Analyst, Economic Development, Director Brownfield Financing Studies)

Annandale, Virginia

Northern Virginia Regional Commission (*Douglas Pickford,* Director Economic and Heritage Resources; *James L. Van Zee*, Director, Regional Planning Services)

Baltimore, Maryland

Maryland Department of the Environment (*Shari Wilson*, Program Administrator Environmental Restoration & Redevelopment Program)

Baltimore Development Corporation (*Evans Paul,* Director, Brownfields Initiative)

Portland, Oregon

Ater Wynne LLP (*Douglas MacCourt, Claudia Powers*, Public and Private and Sector Environmental Lawyers)

METRO (*Mike Burton*, Chief Executive; *Barbara Linssen*, Associate Regional Planner)

Loren Waxman, Developer, Waxman and Associates,
Bill Cobb, Consultant, Bridgewater Group, Inc.

Chicago, Illinois

Chicago Department of Environment (*David Reynolds*, Deputy Director of Brownfields*; Kelly S. Kennoy*, Director of Environmental Services)

Chicago Planning Department (*Bob Kunze*, Deputy Commissioner)

EPA Region 5 (*Jim VanderKloot*, Urban Environmental Manager; *Joseph Dufficy*, Brownfield Program Manager; *Brooke A. Furio*, Brownfield Program Manager)

Niagara Falls, New York

City of Niagara Fall (*Tom DeSantis*, Deputy Director of Planning)

Niagara County (*Edmund P. Sullivan*, Brownfields Coordinator)

Buffalo, New York

University at Buffalo, School of Architecture and Planning (*Robert G. Shibley*, Professor of Architecture and Planning)

University at Buffalo Law School (*Robert S. Berger*, Professor and Director of the Canada-U.S. Legal Studies Centre)

City of Buffalo, Office of Strategic Planning/Comprehensive Planning (*Lucy Cook*, Resource Development Specialist)

City of Buffalo Common Council (*Mary Martino*, South District Council Member)

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